#### YOU COULD TRY THE



OSTRICH SYNDROME, RETREAT INTO A



SHELL, OR HIDE UNDER A

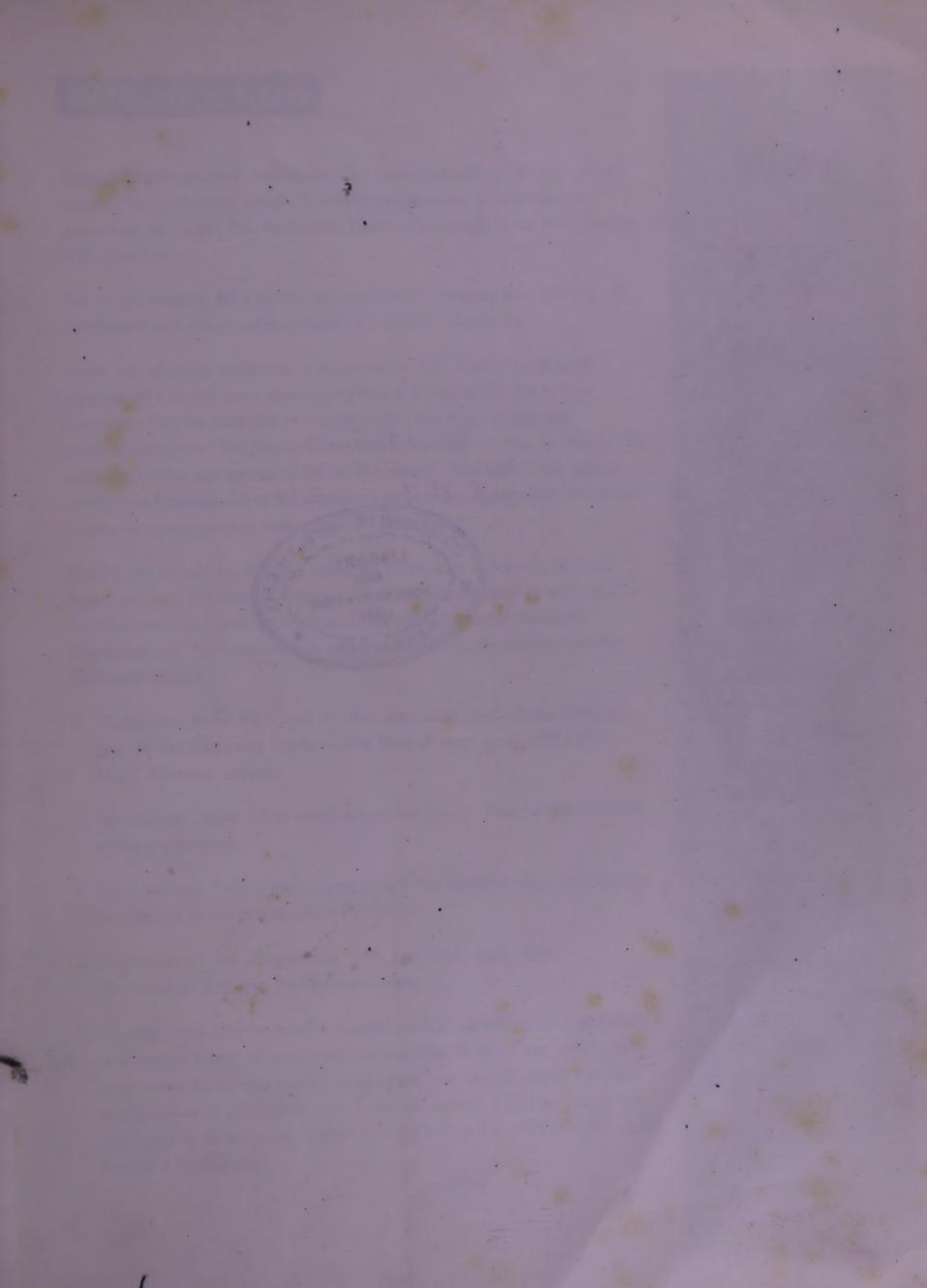


ROCK. IN ANY CASE ITS TIME TO

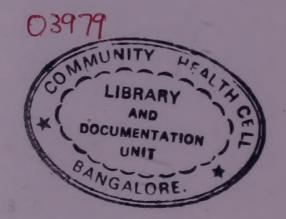
FACE THE FACTS.

AIDS IS PREVENTABLE.

Community Health Cell
Library and Documentation Unit
BANGALORE



DIS-325



#### INTRODUCTION

Today, technology and communication have opened up a new world around us and in our minds. Everyday we receive information in quantities so large, that sometimes there isn't enough time to assimilate and absorb it.

But in our country, information about a deadly disease like AIDS is still insufficient and not as wide spread as it ideally should be.

Since no effective medicine or vaccination has been developed against HIV as yet, and considering that it is invariably fatal, it is necessary that the methods to prevent AIDS be highlighted and emphasised upon. Statistics indicate that HIV most commonly affects the sexually active age group of 16 to 40 years. And within this group, youngsters between 16 to 25 years are even more susceptible. Therefore awareness programmes must target this group first.

Ideally, this should be through using the curriculum in schools and colleges. But until this can be initiated, awareness programmes will have to be conducted by Governmental and Non-Governmental Voluntary Organisations. Each awareness session should ideally incorporate the following aspects:

- Permission from the Head of the institution and active participation of the resources within, in the form of peer groups like NSS, NCC, Rotaract, Leo etc.
- 2. Group size 35 to 50 is ideal, larger the group less the effectiveness of the programme.
- 3. Each session should be tailored to suit the student's age and existing knowledge in the group about HIV/AIDS.
- 4. Evaluation of the programme with pre and post KAP (Knowledge, Attitude, Perception) studies
- 5. It is important that the teacher/social worker should posess detailed information about all aspects of the disease. If there are times however, when he cannot answer a question, he should admit the fact and promise to get information from an expert. Children are generally quick to detect when someone is not telling the truth and this could lead to a loss of trust.

WHY

TALK

AIDS ?

- 1. AIDS affects young economically productive age groups.
- 2. AIDS is not just a health issue it is of socio economic importance as well.
- 3. Prevention and therefore awareness is the only tool we have in the war against AIDS.

We also conduct a 2 days training workshop.

Those interested

may contact

Rotary,
TTK Blood Bank,
Bangalore
Medical Service
Trust
New Tippasandra
Main Road
HAL III Stage
Bangalore 560 075
Tel. 5587903

During the sessions, the following points need to be emphasised.

- 1. The fatal nature and stigma attached to the disease.
- 2. How HIV affects the immune system.
- 3. Difference between HIV infection and AIDS and the course of the disease.
- 4. Modes of transmission, sexuality and sex, voluntary/paid blood donors.
- 5. How HIV "does not" spread.
- 6. Prevention. With the Indian moral and social values to be emphasised especially in the context of prevention.

All work and no play makes inattentive bored students. Therefore it would help if the talks were interspersed with examples and participatory games.

This kit will help you during your interactive sessions. It consists of a booklet with information regarding HIV/AIDS, Games, transparencies and an audio cassette of an actual teaching session.

## ONE POSSIBLE WAY IN WHICH THESE GAMES CAN BE INTEGRATED WITH THE TALK

1. Game : Graffitti (or quiz)

2. Talk : Transparencies 1, 2 and 3

3. Game : Wild fire

4. Talk : Transparencies 4 and 5

5. Game : Playing God

6. Talk : Transparencies 6, 7 and 8

7. Game : Risky - Not risky (or safer sex)

8. Talk : Transparency 9

9. Game : Cross road

10. Talk : Transparency 10

11. Game : Learning to say 'No'

12. Game : The pact (or what if)

13. Game : Come back to Graffitti (or quiz)

#### AIDS

1981 saw a sudden spurt of uncommon, rare diseases like Kaposi's Sarcoma (a rare skin cancer). Pneumocystis Carini Pneumonia etc., among young homosexual males in U.S.A. A study of these cases by the Centre for Disease Control, Atlanta in 1982, resulted in the discovery of AIDS, which they described as "a disease caused by an underlying cellular immune deficiency leading to reduced resistance. So AIDS stands for:

Acquired

This is not a genetic disorder but is acquired during one's lifetime.

**Immune Deficiency** 

The body's immune (defence) system is slowly destroyed leading to Immune deficiency.

**Syndrome** 

It is a disease complexly manifested as various signs and symptoms of many different diseases.

In 1983, Montagnier et al in Paris, reported the discovery of a new virus that they had isolated in AIDS patients which they called LAV or Lymphadenopathy Associated Virus. At about the same time, Gallo and his colleagues in the US isolated a virus from AIDS patients which they called HTLV - III (Human T-Lymphotropic Virus).

Later, it was discovered that these two viruses belong to the same group of retrovirus and in 1986, the International Committee for viral nomenclature decided to call it HIV (Human Immunodeficiency Virus). Subsequently, a second type of the same virus was isolated in AIDS patients in West Africa. This was named HIV - II.

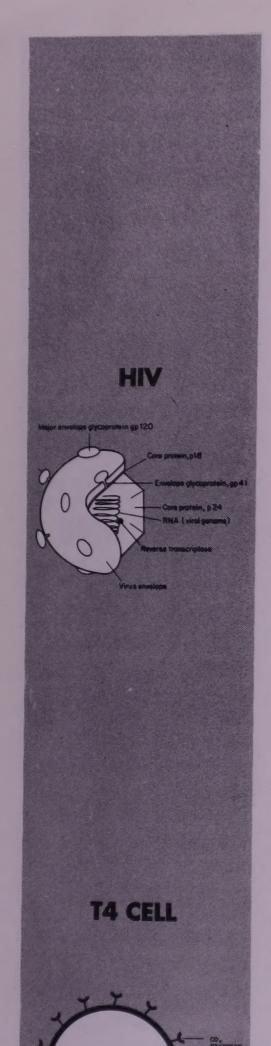
In fact, tests done on blood samples taken from Hepatitis B patients for research purpose and stored for 25 years indicate that the earliest known case of human infection with HIV occurred in a male patient from UGANDA in 1965.

Since then, doctors and scientists all over the world have made rapid advances in the various aspects concerned with HIV and AIDS. But still, it is a relatively young disease, there are new facts emerging every day and we have a long way to go before we conquer it.

AIDS

ACQUIRED IMMUNE DEFICIENCY SYNDROME

H
I
V
HUMAN
IMMUNO
DEFICIENCY
VIRUS



#### AIDS IN THE WORLD TODAY

Since the first cases of AIDS were discovered in 1981, many cases of HIV and AIDS have been identified in people from all over the world, with some of the African countries being worst affected in the last decade.

\* The first HIV case was reported in India in May 1987, in Bombay and later followed by reports from Madurai and Madras in Tamil Nadu. Since then HIV infection rates have increased from 0.5% in 1987 to more than 40% in 1994 amongst commercial sex workers.

#### THE WHO ESTIMATION

YEAR	WORLD	INDIA	
1994	10-14 million	1.5 million	
2000	30-40 million	3 to 5 million people	

So you can imagine, out of a population comprising of more than 800 million, around 1.5 million people may now be infected by the HIV virus in India.

#### AN ENCOUNTER WITH THE SERIAL KILLER. HIV

In human beings genetic information is carried by the DNA. Whereas in HIV the genetic information is carried by RNA. HIV is a retrovirus, so named because it produces an enzyme called reverse transcriptase which transcribes its RNA into a DNA structure.

The RNA is found inside a core made of protein which is covered by an envelope or membrane. This membrane has protein cum carbohydrate molecules known as glyco protein (GP).

Two of these - gp 41 and gp 120, and the core proteins p-18 and p-24 are specific to this virus. These form the basis for the tests used to discover the presence of the virus in a person.

The HIV, like all retroviruses has to get into a host cell for viral replication to take place, and cannot reproduce on its own. It also needs a receptor on the host cell to be able to enter it.

#### **HIV: OF DUBIOUS ORIGIN**

Veterinary doctors have known for a long time about similar immune deficiency diseases caused by retroviruses in monkeys, cats, cattle, dogs, etc. Scientists believe that one of these viruses underwent mutation (a change in the chromosomes) and became capable of affecting human beings. The changed virus probably came from some African monkey and entered man when he was scratched or bitten. This infec-

tion existed in Africa for some 20-30 years before suddenly appearing in Belgium and Haiti and later in other countries.

#### THE TWO FACES OF A KILLER. HIV I & HIV II

There are two known forms of HIV - now named HIV I and HIV II. HIV 2 is similar to SIV (Simian Immunodeficiency Virus) which causes an AIDS - like disease in monkeys and apes. HIV2 causes a less virulent reaction in the infected individual and the advent of AIDS is also delayed. HIV 2 is common in Africa. It has also been discovered in some part of India.

(So testing for the infection should include testing for HIV I and HIV II)

#### THE STRAIGHT FACTS

Now let's for a moment imagine our body is a fortress, with a very efficient defence/immune system. The first line of defence would be the skin, mucus membrane, tears, ear wax etc. They ward off the surface dangers the body could be exposed to.

If the intruders get under the surface they contend with the WBC (White Blood Cells) and Lymphoid tisues like the tonsils, spleen, lymphatic system etc.

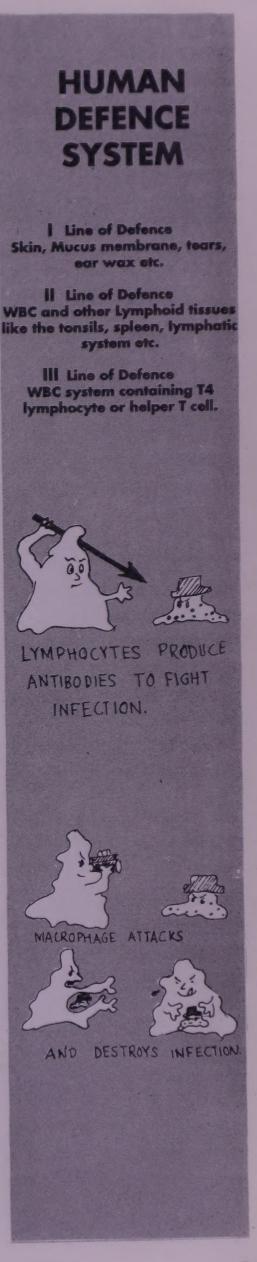
If it still persists, then the acquired immunity takes over by producing antibodies to vanquish that particular disease.

The essential ammunition the WBC system contains is the T4 lymphocyte or helper T cell. The T4 cells are produced in the spleen and bone marrow of man during the foetal stage, infancy and childhood. The T4 cells keep circulating in the lymph and blood, during which they pass through the Thymus gland. The Thymus gland acts like a computer and programmes the T cells to identify:-

- 1) Self cells belonging to one's own body.
- 2) Foreigner cells from foreign bacteria, viruses and other germs. During kidney, heart, liver and other organ transplantations they even recognise that these organs are foreign and this can lead to rejection of the organ.

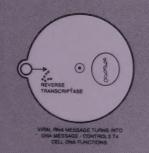
The T4 cell not only recognises anything foreign but also gives the command to the rest of the immune system to go ahead and attack the foreign organisms.

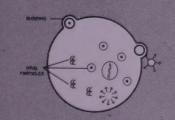
Now this is all very well. But, unfortunately the Thymus gland stops activity after childhood and the adult body cannot make anymore programmed T4 cells. So the number of 'programmed' T4 cells in our body is

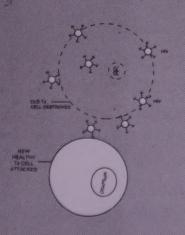


# JUST LIKE A COMPUTER VIRUS CORRUPTS SOFTWARE THE HIV VIRUS CORRUPTS THE T4 CELL









limited to 200 - 300 billion. The T4 cell lives for 60 to 65 years which is why older people after the age of 70 are more prone to infections.

#### THE INVASION

The T4 cell has projections on its wall into which gp 120 of the HIV fits like a key fits into a lock. Once the virus locks onto the host T4 cell, the core protein with RNA goes into the T4 cell. What happens next is that the genetic coding of the viral RNA is not understood by the T4 cell DNA. So the viral RNA produces the enzyme reverse transcriptase which converts the viral RNA structure into a DNA structure. This 'imposter' DNA now gets integrated into the DNA of the T4 cell. The T4 cell unwillingly starts producing viral particles which come out of the host cell by a process known as "budding". Thousands of HIV are produced in one T4 cell and the T4 cell bursts, releasing these viruses which then go onto attack other T4 cells.

The number of viruses in a person's body increase, the number of T4 cells decrease, and slowly but surely, the immune system is destroyed.

So you see, the enemy strikes from within.

## WHAT HAPPENS WHEN A PERSON IS EXPOSED TO HIV

First and foremost it is important to establish the fact that exposure to the virus may or may not lead to infection. Many factors like the route of infection, the quality and quantity of virus and some as yet unknown factors play a part.

But, once infected with HIV the person carries the virus in his body throughout his life. And as of now, there is no medicine that can eradicate the virus from a persons body.

#### THE MYSTERY OF THE 'HEALTHY' PERSON.

#### THE STAGE OF SERO CONVERSION

Ravi was a healthy, 18 year old who went to college, met his friends on the weekend and was above average in his studies. Like any other normal teenager today. One day Ravi had fever, bodyache, sweating etc. The docters he consulted pronounced it viral flu.

Unknown to Ravi, this was the first stage of HIV infection when the body starts producing antibodies against the virus, and is called the stage of sero conversion.

#### **HIV INFECTION PERIOD**

Soon, Ravi began falling ill. There were occassional bouts of fever, diarrhoea, loss of weight, swollen lymph nodes etc. Ravi graduated from college. And he went on to America to do his M.B.A. Eight years went by, he was twenty six now; The HIV lay dormant in the T4 cell. The T4 cell had not yet started producing HIV, and his immune system remained intact. Which is why Ravi contracted no diseases, and looked and felt healthy.

During this HIV infection period, the only way of knowing if a person is infected is by doing the special blood tests called ELISA and the WEST-ERN BLOT. The HIV positive or HIV infected person is a dangerous carrier who can spread the HIV to other unsuspecting people and he too may not realize that he is infected. The HIV infection period can last for 6 to 12 years, or more.

#### THE AIDS STAGE

The story continues. Ravi returned to India, and began working at a reputed firm, where he met Anjali. Both grew to care about each other and decided to get married.

In the meantime, what worried Ravi's parents was that he repeatedly fell ill. T.B. Pneumonia, Fungal infections of the mouth. Apart from these specific diseases he also sufferred from uncontrollable fever, headaches, loss of weight, and acute diarrhoea.

What Ravi was going through was the stage of AIDS, which is the last stages of the HIV infection, when his immune systems had collapsed to an extent where he could not fight any infection any longer. AIDS patients are also prone to Herpes, Cancer, Skin infections, Eye infections leading to blindness, Brain infections leading to dementia etc.

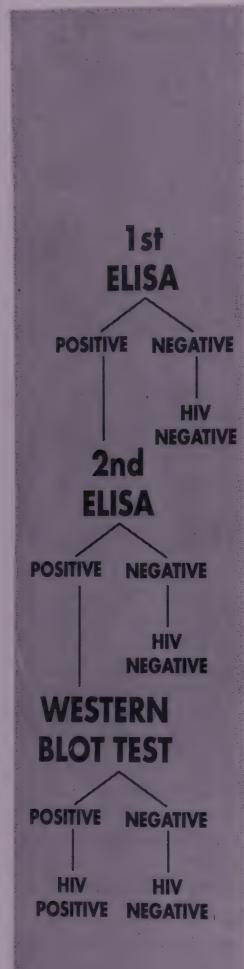
These diseases attack the person during the opportune moment when the defence system is weakened. So they are called "opportunistic infections'.

Once a person comes to the AIDS stage, there is a rapid downhill progression till it finally ends in death in about 6 months to two years.

The number of years the HIV positive person takes to come to the stage of AIDS and thereafter how long he lives with AIDS is much shorter in developing countries like India, as compared to developed countries like USA. This is because of:

1) the already low nutrition level in the people 2) the number of diseases

**POSSIBLE PROGRESSION OF HIV** INFECTION **EXPOSURE TO** HIV INFECTION WITH HIV WINDOW PERIOD (2 WEEKS - 3 MONTHS) SERO-CONVERSION **HIV INFECTION** STAGE (6-12 YEARS) AIDS (6 MONTHS - 2 YEARS) DEATH



endemic in these countries 3) poor hygienic conditions 4) the prohibitive costs of tests and medical treatment

While Ravi was in hospital, he happened to read an article on AIDS. He discovered it matched many of his symptoms. On his own, he decided to consult a specialist, who told him about the different tests available to detect HIV. Ravi decided to get tested for HIV.

#### **TESTS TO DETECT HIV**

- 1) The Blood tests to detect the virus itself are very elaborate, difficult and expensive so they are used only for research purposes.
- 2) ELISA and Western Blot tests: ELISA stands for Enzyme Linked Immuno Sorbent Assay. When HIV or any other organism enters the body, our defence system produces certain substances called antibodies to destroy the foreign or enemy organism.

The ELISA test and the confirmatory Western Blot test detects the presence of these antibodies. So if the ELISA is positive then it indirectly proves the presence of HIV infection. It takes 3 hours to do the test, and special kits, equipment and trained personnel are required to do it.

#### 1) False Negative ELISA

- a) The antibodies against HIV are formed only 2 weeks to 3 months after the person gets infected (seroconversion). This time lag called the "Window period" can sometime take as long as 6 months to 1 year. During the window period the ELISA test will show a Negative result because of the absence of HIV antibodies, even though the person actually has HIV infection.
- b) In the late stage of the disease when there is total collapse of the immune system there is no production of antibodies and therefore false negative result.

#### 2) False Positive ELISA

Sometimes the ELISA test is positive even though there is no HIV because of inherent limitations in the test kit and the principle behind the test. For instance antibodies produced against other disease causing organisms or in certain disease conditions, could be very similar to the HIV antibody, thus giving a false positive result. So a repeat ELISA test or the Western Blot test is done for confirmation. Only after the confirmation tests are positive can one be sure that the person has HIV infection.

#### **ELISA** test in infants

All infants born to HIV infected mothers will have maternal HIV anti-

bodies circulating in their blood till 18 months of age. So the ELISA test will show a positive result whether or not the child has HIV infection. Only after 18 months of age the baby if infected will start producing its own HIV antibodies and so the test should be done only after 2 years of age.

## Who should take the ELISA test? When should it be done?

- 1) All blood donors and organ donors to prevent transfusion of infected blood and organs.
- 2) Any person who has: a) Multiple sexual partners b) Casual unprotected sex (without using condoms) c) Sex with male or female prostitutes d) Homosexual encounters e) Blood transfusion with untested blood f) Multiple blood transfusions for Haemophilia, Thallasaemia, Cancer etc.
- 3) Sexual partners of the above (sub group 2)
- 4) A clinically suspected case of AIDS
- 5) For epidemiological studies to establish the prevalance of HIV infection in a given target group or area. But here unlinked, anonymous testing should be done.
- \* Maintaining confidentiality of the identity of an HIV positive person is of utmost importance. \* Testing should be done with pre and post test counselling after taking consent from the person.

Ravi's ELISA test result as well as confirmatory Western Blot was positive. Finally Ravi knew it. He had AIDS!

#### WHERE IS HIV FOUND?

HIV is present in all body fluids like blood, semen, vaginal fluid, mother's milk, sweat, tears, saliva, urine etc.,

But only blood, semen, vaginal fluid and mother's milk are implicated in its spread.

No drug has been discovered so far to kill the virus as long as it is inside the body. But once outside, the HIV is a very weak, fragile virus which is easily destroyed by:-1. Heat - drying, boiling etc 2. Chemicals - acid, household bleach etc

#### **HOW DOES HIV SPREAD?**

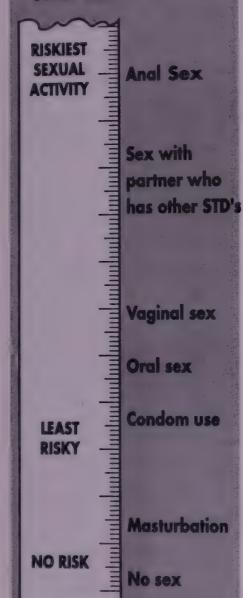
The unbroken skin acts as a 100% barrier against HIV but the virus can pass into a person's body through the mucous membrane. The mucous

# HIV CAN BE DESTROYED BY

- Boiling
- Inactivated in one second.
- Ethanol 70 per cent (700 gms/ ltre).
- Household bleach - 1 per cent solution.
- Formaldehyde 5 per cent (50 gms/litre).
- Chlorine sodium hypochlorite solution - 10 per cent solution.
  - Hydrogen peroxide - 3 per cent solution.
  - Isopropyl alchohol 35 per cent solution
  - Lysol 0.5 per cent solution.
- Tween 20 2.5 per cent solution.

In India 70 to 80% of all HIV infections is through the Heterosexual route.

The 'RISK' Scale



membrane is a thin tissue that lines the eyes, nostril, digestive tract (from the mouth to the anus), vagina, penis, etc.

The 3 routes by which HIV can spread from one person to the other are:

1. Infected blood 2. Sexual contact 3. Infected mother to child.

#### 1. Infected Blood

- a) Blood transfusion of infected blood will definitely result in infecting the recipient. In India, around 10 to 15% cases of infections are the result of infected blood transfusions.
- b) Through infected needles and syringes and other skin piercing instruments: In the North Eastern States of our country where intravenous (I.V) drug abuse is very common, reuse of unsterilised infected needles and syringes by many people has lead to the spread of HIV among them.

## 2. Sexual contact (through infected semen and vaginal fluid

In India 70 to 80% of all HIV infections is through the Heterosexual route.

Though all penetrative sexual activity can lead to infection the following points are to be noted.

- 1) If one of the sexual partners has ulcers on the penis or in and around the vagina due to other sexually transmitted diseases (STDs) eg: Syphilis, Genital Herpes, Genital warts etc., the HIV spreads more easily.
- 2) Anal sex is the riskiest from of penetrative sex because multiple injuries and tears are caused in the anal wall, which makes it easier for the HIV to enter the blood stream of the partner. This is why it spreads fastest among homosexuals.
- 3) Oral sex when the mouth is used for penetrative sex, the amount of virus secreted in the saliva is comparitively less, but still there is a certain amount of risk of infection. The risk is not as much as in anal or vaginal routes. The risk increases if there are ulcers, injuries or bleeding gums.

Similarly there is a very small risk factor associated with deep kissing (french kissing).

## 3. From an infected pregnant mother to her child

\* 30 to 40% of babies born to HIV positive mothers are infected. There

is no way of preventing this - the mother could be told the facts and the option of may be having an abortion is left to her.

The HIV passes from the infected mother (a) during pregnancy through the placenta to the foetus, (b) during delivery and (c) through the mother's breast milk to the baby.

Asking the mother not to breast feed the child is not advisable in developing countries like ours. The mother's milk has protective antibodies against many endemic diseases which protect the infant against these diseases.

#### THE HIV VIRUS CAN BE TRANSMITTED THROUGH

\* Casual unprotected sex (without using condoms) \* Multiple sexual partners. \* Homosexual encounters. \* Infected blood administered during transfusion intraveneously. \* Infected syringes, blades, and other skin piercing instruments.

#### YOU CANNOT GET HIV THROUGH

- \* Normal social contact like shaking hands, hugging, sharing plates, cups, glases, etc. \* Using public toilets, swimming pools, public transport like buses, trains, etc. \* Food, drinks etc. \* Insects, bugs, mosquito bites.
- \* Sneezing, coughing etc.

Ravi realised he had got the HIV infection through sexual contact with a girl he had had an affair with in college before he met Anjali. He decided to help others get information about HIV and AIDS, so that they did not make the same mistake he had. He started conducting awareness programmes for youngsters in schools and colleges.

#### HOW YOU CAN PREVENT INFECTION

- 1. Via the sexual route:
- \* Have sex with only one partner who is faithful to you. Sex with multiple partners is a high risk venture. \* Avoid unprotected, casual sex with unknown partners, strangers, prostitutes etc. \* Avoid pre-marital and extra marital sexual activities. \* Using good quality condoms gives considerable protection against not only HIV but also against other sexually transmitted disease like Syphilis, Gonorrhoea etc.
- 2. Prevention of infection through infected blood:
- \* When blood transfusion is required, blood from a voluntary donor/voluntary blood bank, which is tested, and has a label stating that it is ELISA negative, should be used. \* Use disposable or adequately sterilized





Unhealthy

attitude to

sex.

needles and syringes. \* All skin piercing instruments like knives, scalpels, needles, dental equipments etc. should be sterilised before use. \* At the barber's shop, use disposable or sterilised razors and blades for shaving. Razors and blades can be sterilised by boiling in water for 20 minutes or keeping them immersed in household bleach for 30 minutes.

Important points to remember

\* Once HIV enters a persons body it stays for life. It cannot be dislodged at any point. \* There is as yet no cure, or vaccine against HIV. \* Therefore, prevention is the only way to avoid HIV infection and AIDS. \* Sooner or later the HIV person gets AIDS, which is FATAL. \* An HIV infected person looks healthy, the only way we can find out if he is infected is by doing a special blood test called ELISA and Western blot. \* HIV spreads through sexual contact and through infected blood. \* It is not spread through normal social contact.

#### Values and goals:

Choices and decisions: risk behaviour v/s responsible behaviour:

Life is like a snakes and ladder game. When you make the right choice/decision you go up the ladder, a wrong choice brings you down a snake.

Good values like loyalty, honesty, love and affection, respect, sense of responsibility, a good moral and social value based environment etc., will lead to high self esteem, a healthy attitude to life in general, and in particular (in the context of risk behaviour and AIDS) a healthy attitude to sex and responsible behaviour.

In contrast a low moral and social environment, affectionless environment, exposure to substance abuse, exposure to sexual abuse etc., will lead to low self esteem, unhealthy attitude to sex, and risk behaviour.

Factors which could contribute to risk behaviour are:

Personality - eg: a weak nature easily succumbing to outside pressure, a rebellious nature (often seen in adolescents).

Values - Perceived low moral and social values from parents, peers, and others eg: casual free sex practices seen sometimes in the very low socio economic groups and in the so called 'free' or 'liberated' society groups, children of commercial sex workers etc.

Exposure to sexual abuse, especially at a very young age, leading to an unhealthy attitude to sex.

Vulnerable groups - commercial sex workers. I/V drug users.

Risk patterns - Substance abuse, holiday behaviour (people "feel free" to behave in a manner in which they would not when in familiar surroundings), people on the move and away from their homes for long periods of time.

Prevention of HIV infection is in one's own hands. Saying "no" to risk behaviour and therefore "no" to HIV infection is the most important tool we have and this is a personal choice.

#### TO TRAP THE KILLER

Cure, Vaccine, Management of HIV/AIDS

- \* Zidovudine/Retrovir/AZT and other groups of drugs like ddL, ddA, ddl etc which have been developed against HIV have not been able to totally destroy the virus in an infected person. But they have been able to prolong the life of the person by delaying the onset of AIDS.
  - Though these drugs are available in India, their prohibitive cost make them unaffordable by most people in India.
- \* Various other allopathic drugs including aspirin, interferons etc.; ayurvedic drugs, naturopathic treatment using pineapple, jack fruit etc., are being tried. But so far no proven cure has been found.
- \* Gene therapy (gene manipulation) is the latest area where research is being conducted to find an effective cure.

#### Vaccine: Why it hasn't been produced as yet.

Traditionally, live attenuated virus or killed virus is given (injected or oral) to a person to stimulate his natural immune system to produce antibodies against that particular virus. In the case of HIV, the killed virus can produce various toxic side effects, and the live attenuated virus could mutate, and this mutant could produce an AIDS-like disease.

In any case the antibodies produced against HIV in an infected person does not seem to be able to destroy the HIV, and we know for a fact that the person continues to be infected for life.

Since the HIV mutates very rapidly, any cure or vaccine developed against one form may not be effective against the new variant.

#### Management:

Since therapy with AZT and other anti-viral drugs is very expensive, the management of HIV/AIDS patients consists of:



#### VOLUNTARY DONOR

#### PAID DONOR X

#### TESTED BLOOD

# UNTESTED BLOOD X



- 1. Counselling and psychological support including advice about safer sex methods to prevent spread of infection to others.
- 2. Advice about general health, nutrition, exercise etc to strengthen the immune system.
- 3. At the first sign of any opportunistic infection, medical treatment should be started.
- 4. Tuberculosis being endemic in India, HIV positive people may consider taking anti-tubercular drugs as a preventive measure.
- 5. An HIV infected individual, working in a healthcare setup, may have to be taken away from direct patient care and given work in an administrative capacity.

# SOME MYTHS, MISCONCEPTIONS, COMMON DOUBTS AND FALSE BELIEFS ANSWERED. Blood:

- One can get HIV infection by donating blood. \_\_\_\_\_ Wrong!
  One cannot get HIV infection or any other infection when
  donating blood because pre sterilised disposable needles and
  blood bags are used to collect blood.
- 2. (Q) What difference does it make whether we take blood from a paid donor or from a voluntary donor as long as we do the ELISA test to ensure safety?
  - (A) \* Statistics the world over prove that there is an increased incidence of transfusion transmitted diseases amongst paid donors.

    \* During the Window period which sometimes can be as long as 1 year, the ELISA test can give a false negative result. To guard against this the blood donor is asked various questions like if he has had any recent illnessess, fever, diarrhoea, loss of weight, swollen lymph glands, any history of risk behaviour like unprotected casual sex with strangers, sex with prostitutes, multi partner sex, intravenous drug use, recent transfusion with untested blood etc.

If the answer to any of these questions is positive the voluntary donor will automatically defer from giving blood where as the paid donor won't reveal the truth.

3. It is safe to take blood from close relatives and friends.

\_\_\_\_\_\_ Not always!!

A boy on his way back from school was knocked down by a bus

and sufferred multiple internal injuries. He was taken to a hospital and he was advised surgery. He needed blood urgently, and his older brother volunteered to donate blood. The blood bank officer explained that ELISA and other tests had to be performed, which would take more than 3 hours. So he advised the brother to transfuse the tested blood from another voluntary donor which was available in the blood bank. But the brother insisted that only his own blood should be transfused, and the doctor had no other choice except to do so. Unfortunately the brother's blood sample when the test result came after 3 hours was found to be HIV positive. If only the safe tested blood available at the Blood Bank had been transfused this would not have happened and the little boy would not have got the HIV infection from his brother. So one should always test the blood prior to transfusion even if it is from close relatives or friends.

- 4. (Q) Why can't we take away all the blood from an infected person and replace it with new uninfected blood?
  - (A) HIV is found not only in blood but in all other body fluids like semen, vaginal secretions, lymphatic fluid, sweat, saliva etc. So it will not help to replace the blood with un-infected blood.
- 5 (Q) Can healthy T4 cells either from donors or by growing it in laboratories be transfused to an AIDS patient to build up his reduced T4 cell level?
  - (A) Each person's immune system, and especially the T4 cells are unique to that person. The T4 cells of each person, during its journey through the Thymus gland, during infancy and childhood, is programmed by the gland to recognise what is "self" and what is "foreign". So T4 cells from another person or laboratory grown T4 cells may not suit that person.
- 6 (Q) Can mosquitoes spread HIV infection?
  - (A) No. When mosquitoes bite an infected person, the blood that is sucked by it goes into its stomach, where HIV is destroyed.

The malarial parasite has two parts in its life cycle: one in the red blood cell of man, and second in the salivary gland of the mosquito. When the mosquito bites an infected person, the MP will undergo the second part of its life cycle in the salivary gland and is secreted in the saliva which is injected into another person when the mosquito bites him. The HIV is not secreted in the saliva, and the amount of virus found on the

" He is my own brother, I will take blood from him only. For get the tests."

"This is an emergency, I cannot wait. For get the tests just give the blood."

Doctor - "No matter what the emergency is, or who the donor is. the blood has tobe tested."

#### HOW TO USE A CONDOM



Open foil carefully so as not to tear the condom inside



Put the condom on as soon as penis is hard and before any sexual.
Squeeze the closed end of condom to expel any air.



Unfold the condom down the full length of the penis.



After sex withdraw penis and ease off condom without spilling any semen.



Wrap used condom in a tissue/paper and throw in a dust bin. Do not throw condom into toilet.

#### CAUTION

- 1. Use a new condom every time. Never reuse a condom.
- Do not use coconut oil, vaseline or any other oil based lubricants on condom.
- 3. Check the expiry date on the foil.

probosis is not enough to infect. What little blood there is also dries up and the HIV dies.

We know that the HIV infections are most common among the most sexually active younger age group between 18 and 40 years of age. Whereas if mosquitoes could spread it, HIV infection would have been as common among all age group and also would have spread much faster.

#### Sex:

- 1 (Q) How good is the protection given by condoms against AIDS and other STD's?
  - (A) Condoms give considerable protection against AIDS and other STD's provided:
    - (a) Condoms should be of good quality, manufactured by a reputed company which follows good manufacturing practice and with quality control and quality assurance methods.
    - (b) Condoms can be used only once.
    - (c) Oil based lubricants like coconut oil, vaseline etc. should not be used with a condom because they weaken the wall of the condom, thus leading to tears and holes during use.
    - (d) Always check the date of expiry on the packet.
- 2 (Q) Will masturbation make one weak?
  - (A) Masturbation (shagging as it called among adolescent students), is a part of the process of growing up, when the various physical and sexual changes and awakening of sexual desires take place. It is the safest form of satisfying one's sexual desire as no other partner is involved. It does not make a person weak, physically or emotionally and the person can have a normal sexual life thereafter. Masturbation and night emissions (wet dreams) are quite common amongst adolescents and sometimes adults too.
- 3. If prostitution is abolished the spread of AIDS will be stopped.

  \_\_\_\_\_ Wrong!!
  - (a) One can acquire the HIV infection from any infected person, not necessarily from prostitutes only. Obviously because of

multi-partner sex, the prevalance of HIV is very high amongst prostitutes, and therefore the risk of acquiring HIV from them is greater.

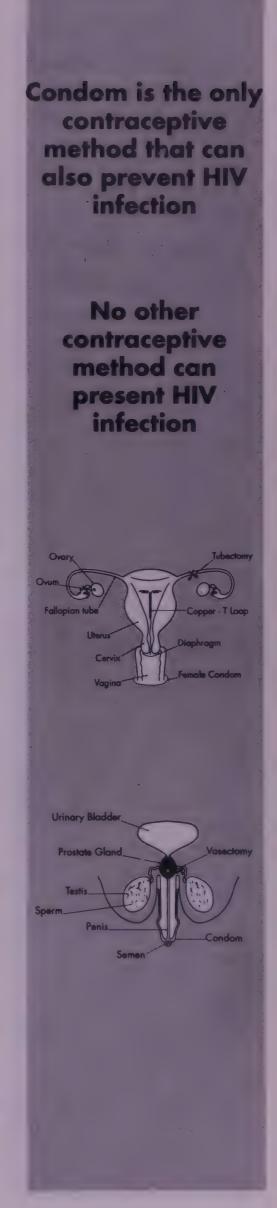
- (b) Abolishing prostitutes by legislation only makes the problem go underground.
- (c) The "clients" of the prostitutes should be made aware of the risks associated with this kind of unprotected casual sex.
- 4. It is safe to have sex with a "healthy" partner.

  Wrong!!

Sure! But what do you mean by healthy partner? By looking at a person one cannot make out if that person is infected with HIV or not. Only by doing the blood test (ELISA) can you decide whether that person is infected.

- 5. One should have sex with a "tested" partner only. \_\_\_\_ Wrong!!
  - (a) The ELISA test takes three hours to perform.
  - (b) The ELISA gives a false negative result during the window period and false positive result due to inherent limitations in the principle and procedure of the test.
  - (c) A person can acquire infection at anytime, so ELISA negative once does not make the person safe for life, at the same time it is not possible to test person every time before sex.
- 6 (Q) What is meant by "safe sex"? Is abstinence the only way to avoid HIV infection through the sexual route?
  - (A) Abstinence is the best way to avoid HIV infection through the sexual route but obviously not the most practical. Given this fact the following activities can only be termed as safer sex -1. Non penetrative sex related activities like petting, kissing, masturbation etc., 2. Sex with one faithful partner only (no sex before marriage, no extra marital sex etc.) 3. Using condoms.
- 7 (Q) What are the contraceptive methods that can be used to prevent infection?
  - (A) The Condom is the only contraceptive device that can prevent HIV and other STD's.

In vasectomy, (family planning operation in men) the tubes that bring the sperms from the testes is cut. So the semen does not contain





sperms (therefore no conception) but definitely will contain the HIV in an infected individual and therefore is infective.

Similarly in women, tubectomy (the tubes bringing the ovum or egg from the ovary to the uterus is cut), oral contraceptive pills like Mala D, etc., (act on the reproductive hormones), diaphragm (fits on the cervix which is the mouth of the uterus and prevents sperms from entering the uterus), loop, copper T and other intrauterine devices (prevent the embedding of the fertilised ovum in the wall of the uterus) prevent conception but do not prevent HIV from passing to the woman or from her to others.

- 8 (Q) What do lesbians do? Can HIV pass through sexual activity from one lesbian to the other?
  - (A) Lesbians either masturbate by stimulating the clitoris which is the sensitive button like structure found above the vagina, or by using dildoes, vibrators etc. for penetrative activities. The chance of HIV passing from one lesbian to the other through the sexual route is very low.

#### **GENERAL/LEGAL/ETHICAL ISSUES**

- 1 (Q) Can HIV infection pass from the patient to the doctor, or from the doctor to his patient?
  - (A) As long as proper precautions like using gloves, sterilising needles, syringes, and surgical and dental equipment etc., are followed strictly HIV cannot spread from the doctor to the patient or viceversa.
- 2 (Q) Is there any risk in trying to help and give First Aid etc, to a bleeding accident victim?
  - (A) If there are no cuts or open wounds or ulcers on your hands and arms, giving first aid to the accident victim is quite safe.
- 3 (Q) Is it safe to use public toilet and public swimming pools?
  - (A) Yes, it is safe because, the HIV is destroyed by the Chlorine (bleach) used to disinfect swimming pools.

On a toilet seat even if infected blood or other body fluids are present, once the fluid dries up the HIV is destroyed, and in any case cannot enter your body unless it comes into contact with a cut on your skin.

- 4 (Q) If detected early can HIV infection be cured?
  - (A) No, whether detected early or late HIV infection cannot be cured as of today.

- 5 (Q) Can HIV affect other animals?
  - (A) HIV is the virus that affects human beings specifically. There are other viruses which affect animals. HIV is most similar to the SIV (Simian Immunodefeciency Virus) which affects monkeys and apes.
- 6 (Q) Why don't we test everyone for HIV?
  - (A) The test should be done for a specific purpose only as given earlier. Even then it should be done with pre and post test counselling. In any case ELISA negative once does not mean that the person cannot get the infection later.
- 7 (Q) Should a couple get tested before marriage?
  - (A) They can get tested but since marriage is based on mutual trust, affection and respect, each couple will have to talk it over and decide for themselves. In any case they should remember that unless there has been risk behaviour or risk factors, there is no need to test and also that even a person who is HIV negative when tested the first time, can get the infection later.
- 8 (Q) Why test anybody for HIV since there is no cure?
  - (A) If a person is found to be HIV positive, he needs psychological counselling, he needs to be told about HIV infection & AIDS, modes of spread etc., so that he does not pass the infection to others, he can be given advice on general health and to consult a doctor as soon as any infection sets in so as to delay the onset of AIDS. One must never forget that a vaccine or drug against HIV may be discovered soon.
- 9(Q) Should an HIV infected person be dismissed from his job?
  - (A) HIV does not spread by normal social contact except through sex or blood. So the HIV infected person is not a threat to others either at work or at hame. His rights and dignity should be respected, and others can give him emotional support.

He will also be able to work normally till the stage of AIDS sets in.

- 10(Q)Can legal action be taken against an HIV infected person?
  - (A) No! Unless he/she deliberately tries to infect others, in which case he/she is liable for criminal prosecution.



Be a friend to an HIV infected person

GAMES

Apart from technical information, it is necessary to involve the students in active participation. There are games expressly designed for this purpose. They will help you tackle the subject in an informal yet educative manner.

The question and answer session will also assist you to 'break the ice.' Do feel free to decide how and when you wish to handle the elements in this package.

## (A) FOR ASSESSMENT OF THE EXISTING KNOWLEDGE ABOUT HIV/

#### Game 1.

#### **Word Association**

Ask the students to write on a piece of paper, the first thought that springs to their mind when given a word. Then say words like HIV, AIDS, Condom, Sex, blood etc., (5 to 8 words totally) slowly giving them about 10 seconds between two words to enable them to write.

Now let them form groups of 5 to 6 students each. Give them 5 minutes to discuss what they have written. The group leader then reads out what they think is the most important phrase or sentence associated with each word.

## Game 2. Graffitti Sheets

Pin up several graffitti sheets and ask the students in groups to write statements about certain words that are told to them. Eg. Prostitute, Healthy Person, Masturbation, Baby with AIDS, Blood donation etc. Give each group 1 graffitti sheet, and allow them 10 minutes to discuss and mark against each statement using symbols - T (True)/F (False)/? (don't know)/Y (agree)/N (don't agree).

Come back to the graffitti sheets after the talk and allow the groups to discuss and change symbols if necessary, with the new information they have gained.

# (B) TO CORRECT WRONG BELIEFS AND MISINFORMATION. Game 1. Risky/Not Risky

Pin up drawing sheets with "RISKY", "NOT RISKY" & "DON'T KNOW" written on them, in 3 different corners of the room. Make some statements (it is better in the form of stories or examples). and ask the students to go to the corner which they believe to be applicable. This can be followed by a general discussion in which the wrong beliefs will get corrected. Eg:

- \* Peter said "I don't have sex with 'B' grade women or prostitutes.
- "I sleep only with `Healthy girls from good families'. Do you think Peter is at risk of getting HIV infection?
- \* Raju is a happily married man who has 2 children, the first, a 5 year old girl and the second, a 3 month old boy. After the second child he had a Vasectomy Operation. Raju has had extra marital sex on and off. 2 years ago when he had an ELISA test done before applying for a VISA to go to a foreign

country, it was discovered that he had HIV infection and his VISA application was rejected.

\* Lakshmi, his pretty unmaried neighbour and Raju were attracted to each other. But when it came to having sex, Lakshmi was worried. Raju said "don't worry, I have had a vasectomy operation, you won't become pregnant".

True. Lakshmi will not become pregnant, but what about HIV infection?

\* Mumtaz is very careful with her boy friend. She has heard about AIDS. So she refuses to have sex with him. But occasionally, when he has pleaded at least to have oral sex she has agreed. Mumtaz's boy friend has HIV infection. Is there a risk of HIV spreading from the boyfriend to Mumtaz?

## Game 2. True Or False Quiz

Give some statement to the students to mark as true or false before the talk and in a second column after the talk. This will also be a form of KAP (Knowledge Attitude Perception) study.

Write True or False	Before Talk	After Talk
1. Mosquitoes spread HIV infection		
2. It is safe to take blood from a close relative or friend		
3. We can get HIV infection when donating blood.		
4. It is safe to have sex with a man who has had a vasectomy (family planning operation)		
5. Condoms give considerable protection against HIV infection.		
6. Oral sex is safe.		

#### Game 3. (Safer Sex)

Ask the students to write down 3 ways by which they can avoid HIV transmission through sex and discuss.

(Most students mention condom use, a few about avoiding multi partner sex.)

The following points should be emphasised and discussed:

- \* Abstinence or no sex at all would be the safest, but is not a practical solution.
- \* Sexual activity and sexual desire are not isolated and have other facets including love, affection,

## THE CHOICE IS YOURS

No sex before marriage.

No extramarital sex

Sex with one faithful partner only.

Condom use

No sex at all.

Risk behaviour Vs Responsible behaviour respect and consideration for ones partner. These are the values that help form a bond between married couples.

- \* Any form of sex can carry a certain amount of risk, so we cannot talk about "safe sex" but only about "safer sex."
- \* Having sex with one faithful partner only is one of the safest methods.

  This means being able to say "no" to casual sex, pre marital and extra marital sex.
- \* The social, cultural and religious values in our country which emphasises the avoidance of casual sex is important. Even the western countries where free sex was being practiced, are now turning to value based and family oriented relationships.
- \* Where/when casual sex is not avoidable, at least using a condom will help.
- \* Non penetrative sexual activities including masturbation, where no other partner is involved is also safe.

# (C) ATTITUDES TOWARDS HIV/AIDS VICTIMS: Game 1. Four Corners Game

Pin up drawing sheets with "AGREE", "DON'T AGREE", "I AGREE BUT...." & "I DISAGREE BUT....." at 4 corners of the room. The students will have to take their stand about certain statements (eg. given below) and go to the particular corner.

Next each group will try to convince the other groups to change their opinion. Since this game is about opinions and attitudes, there is no "right" or "wrong" but the teacher/co-ordinator can try to influence the opinions towards the general goal which is, "no matter how or who has the HIV infection, one should try to empathise with and help that person." Statements:

- \* Serves this fellow right he is sexually promiscuous and deserves to get AIDS. But I pity this child who is an innocent victim and got HIV infection through blood transfusion.
- \* Government should ban prostitutes then only AIDS can be controlled.
- \* Unless the HIV infected person is dismissed we will not work in this factory any more.

#### Game 2. Playing God

This game will explore attitudes, prejudices and assumptions towards people with HIV infection. Read out a scenario, and give additional information in stages.

"You have a medicine which will cure HIV completely, but it is enough for one person only. There are 3 HIV infected people - a two year old child, a prostitute and a businessman who got it through blood transfusion. Who will you give the medicine to and why?"

(Usually at this stage most students will say - the child)

"The child has cancer and can live for 2 more years only. Would any of you like to change your mind? If so give your reasons."

(Usually at this stage the students will want to give it to the prostitute to prevent more people getting the infection from her.)

"The businessman gives a lot of money to charity and especially to an organisation that is helping AIDS patients and doing research to discover a cure for AIDS.

The prostitute will continue in her profession. Would you like to change your mind - if so why?"

(Usually some students will now want to help the businessman)

"The prostitute works hard to pay the fees for her 20 year old daughter studying in the second year in an Engineering college. Who will you help and why?"

#### (D) PERSONALISATION:

It is not enough to give theoretical knowledge about AIDS. The students will have to realise that HIV/AIDS is something that can affect them and that the responsibility of preventing the infection lies entirely with them.

## Game 1. Risk taking:

This game will bring out the meaning of "risk" and the factors which could lead to risk behaviour.

Read out the following scenario, and give more information in stages.

"You are waiting to cross the road and see a bus coming at high speed. Will you try and run across?"

(Usually the answer is - "No")

Your friend says "I bet ten rupees that you cannot the cross the road." Will you take the bet?"

(Some students may say that they will take the bet)

"Your younger sister also has to cross the road with you. Will you take the bet and run with her across the road?"

(Usually nobody will want to take the risk at this point)

From this game try and bring out the following points:

- \* Peer pressure can make you take risks which you would not normally take. So this is why more students experiment with alcohol, smoking, drugs, sex etc.
- \* When you feel responsible for someone else (in the above story, your sister) you are less inclined or not at all inclined to take any risks. But you must remember that you have a responsibility not only towards your parents, teachers, friends etc but also to your own self in the context of HIV and AIDS.
- \* All the facts about HIV/AIDS/prevention/risk behaviour etc may not be of relevance to you today. The peer pressure along with the freedom away from parental care which you may experience a few years hence can pressurise you into risk activities. Please remembr that HIV/AIDS is one area where there is no looking back, and only you can take the right decisions.

## Game 2. What if .....?

This game will bring out the fact that the many ambitions that the students have, will be affected if they get HIV infection. Ask the students to do the following:

"Fold a piece of paper vertically into half. Then make 4 columns in the second half. In the first half of the paper, list out the following:

- (i) Two things which you really want to do in the next 3 weeks.
- (ii) Two things which you wish to do in the next 3 years.
- (iii) Two things which you would like to accomplish in the next 10 years.

Now write "cost" on the first column and mark anything on your list which would cost more than Rs. 10,000.

Next on the second column write 'USA' and mark anything on your list which you can do only in the USA.

Next write HIV on the third column. Suppose you get HIV infection today, mark the activities in your list which you will not be able to do.

Lastly write AIDS on the fourth column. Suppose you got HIV infection 10 years ago and now you have AIDS, mark the activities in your list which you will not be able to do.

Preserve this piece of paper, it will help remind you that many of your ambitions and aims in life which you wish to accomplish will not be possible if you were to acquire HIV infection.

# TO REINFORCE VALUES, SELF ESTEEM, RESPONSIBLE BEHAVIOUR ETC... Game 1. Self Esteem

Ask each student to write the following.

- 1. The thing I like best about myself.
- 2. One thing my mother/father like about me, and the thing I like about them.
- 3. One thing my friend respects in me, and I respect in him/her.
- 4. One thing my teacher likes about me, and I like in him/her.

Ask them to look at the statements. Ask them how they feel about themselves. Ask them how often the parent/teacher/friend has told them about the quality they like in them, and vice-versa.

Tell them about "good strokes" (when somebody praises a good quality in you) and "bad strokes" (when somebody says something bad about you). Good strokes make a person feel good and his self esteem increases thereby making a person perform better in life. Bad strokes decrease self esteem and leads to a feeling of inadequacy and failure.

#### Game 2. The Pact

Ask the student to write the following.

- 1. The person whose opinion they value.
- 2. The person they respect.
- 3. The person they love.
- 4. Any personal achievement that they are proud of.
- 5. Their future goals and aspirations.
- 6. The first steps that they have to take towards this goal.
- 7. The steps that have to be taken in the future towards achieving the goal.
- 8. Anything that they may have to sacrifice to achieve the goal.

Ask the student to show this later to the person/s they love, and value. This will result in an unwritten "pact" which will make the student more determined to work towards achieving the goal.

#### Game 3: Learning To Say "No"

Ask the students to role play the following scenarios. Try and bring out the points written within brackets.

- a) Two students trying to convince a third to bunk classes and come with them for a movie. (Saying 'no' to temptation)
- b) A boy trying to convince his friend not to wear the pink coloured shirt as it doesn't suit him. (Sometimes one must learn to listen to good advice from others)
- c) A clerk talking to his wife and children about a person offering a bribe to him in the office.

d) A boy being tempted by his friends at a party to have a drink and later in a drunken state trying to kiss his girl friend. The girl gives in to this but the boy friend now wants to have sex with her.

# GENERAL Game 1. Dumb charade:

At the end of the programme, divide the students into groups of 5 or 6 each. Each group has to act out any aspect/message/fact etc., about HIV/AIDS (no talking at all) and the other groups will have to guess what has been enacted.

#### Game 2. Wild Fire

This game helps to bring out the fact that HIV is spreading very rapidly. This game needs 2 people, the teacher and another volunteer. The teacher announces "Two of us will shake hands with some of you students. One of us is not infected and will shake hands normally with you. The other person has HIV infection and that person will squeeze your hand, there by passing the infection to you. You in turn must shake hands with at least 3 or 4 other students, and if your hand has been squeezed (HIV positive), you must also squeeze the other person's hand."

At the end of the game the teacher says "Now those of you who are infected (whose hands were squeezed) raise your hands."

A number of students, sometimes almost the whole class will raise their hands.

Teacher - "Before the game only one of us in this room was infected, now see how of many of you have got the HIV infection!! Obviously, this is just a game and even if one of us had HIV we cannot spread it by squeezing your hand. Nevertheless one can realise how fast HIV can spread from one person to the other if precautions are not taken and if risk behaviour is practised."

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